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## OFFICE OF THE INDEPENDENT BUDGET ANALYST REPORT

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**Date Issued:** January 28, 2010

**IBA Report Number:** 10-09

**Audit Committee Meeting Date:** February 1, 2010

**Item Number:** 6

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# Implementation of Recommendations identified in the October 26, 2009 Performance Audit of the Streets Division

## OVERVIEW

On Monday, November 9, 2009 the Audit Committee heard a report from the City Auditor regarding his October 26, 2009 Performance Audit of the City's Street Maintenance Functions. The Performance Audit is the first of a series of three reports that the City Auditor is planning to produce related to the evaluation of management practices and internal controls for citywide street maintenance. In the City Auditor's October 26, 2009 Performance Audit he found the following weaknesses:

- The Street Division is reliant on street condition information that is incomplete and provides limited usefulness for effective maintenance decisions.
- Street Division staff does not uniformly update condition information when maintenance activity is performed.
- The Streets Division has not incorporated a degradation program into its pavement management system that would automatically update street condition information on a periodic basis.

In addition to the weaknesses identified in the Performance Audit, the City Auditor made the following recommendations:

1. Expedite the performance of a complete citywide street assessment survey prior to the selection of streets for future citywide resurfacing contracts.
2. Ensure that the condition ratings for recently resurfaced streets are effectively updated within the pavement management system in a timely manner.

3. Implement a degradation program into the pavement management system to update street condition ratings on a periodic basis.
4. The Street Division should formally document written policies and procedures for the identification and selection for inclusion into citywide street resurfacing contracts.

Based on the information provided at the November 9, 2009 Audit Committee meeting, the Committee members directed City staff to:

1. Work with the Independent Budget Analyst (IBA) to develop implementation actions related to the Auditor's four recommendations included within the audit report and be presented to the Audit Committee within 90 days, and be forwarded to City Council for approval, at which point Proposition 1B grant funds may be expended.
2. Work with IBA to incorporate audit recommendations into the Pavement Management System (PMS).
3. Incorporate public input within the methodology for evaluating road conditions and that the Pavement Management System be made available to the public within 24 months.
4. Incorporate Pavement Management System and Overall Condition Index information to develop a deferred maintenance calculation that contains a net liability and suggested annual required contribution payment to pay down deferred maintenance.

## FISCAL/POLICY DISCUSSION

Since the November 9, 2009 Audit Committee meeting, the IBA has worked with Streets Division Management staff to develop a plan to address the recommendations outlined in the City Auditor's October 26, 2009 Performance Audit and also the action items identified by the Audit Committee. The following sections outline the plans to address the four Performance Audit recommendations and the additional action items identified by the Audit Committee.

## City Auditor Performance Audit Recommendations

**Recommendation #1:** *Expedite the performance of a complete citywide street assessment survey prior to the selection of streets for future citywide resurfacing contracts.*

The Street Assessment Survey is planned to be undertaken in Fiscal Year 2011. The Assessment will encompass all City asphalt streets. The Survey will not include alleys, concrete streets, private streets, and private driveways. Staff has stated that the City's concrete streets were surveyed in Fiscal Year 2009. The expected cost of the survey is \$400,000 and staff is planning to use existing funds within their budget for the survey. Streets Division has begun the preliminary process to hire a consultant to perform the Street Assessment Survey and expects to award the contract by August 2010 if funding is approved. The Street Assessment Survey is expected to start shortly after the contract is awarded and will take approximately 3-5 months to complete.

The IBA has discussed with staff the possibility of the City undertaking Street Assessment Surveys in-house instead of hiring private consultants. The benefits of this would be that the City would have up-to-date condition assessments for the City's streets. Under the City's current plan, a Street Assessment Survey will be completed every four years using private consultants. Staff has stated that if the City were to undertake the surveys in-house then specialized equipment and software would need to be purchased and the costs would be substantially more than hiring a consultant.

As an example, the City of Phoenix recently obtained the vehicle and needed software to complete assessment surveys. The vehicle and software costs were approximately \$700,000 with annual equipment maintenance expenses of \$55,000. The annual staffing cost for the vehicle is \$133,000 which includes 2.00 Engineering Technicians that are trained to operate the software and vehicle. Based on the information provided by the City of Phoenix, the total costs over ten years for their program is \$2.6 million (\$700k vehicle, \$1.9 million for annual operational costs) compared to the City of San Diego's \$800k (One Street Assessment Survey completed by a private consultant every four years at an estimated cost of \$400k).

**Recommendation #2:** *Ensure that the condition ratings for recently resurfaced streets are effectively updated within the Pavement Management System in a timely manner.*

The street condition rating updates will commence as streets included in the Fiscal Year 2010 resurfacing projects are completed. Streets Division is expecting to complete 134 miles of overlay and 148 miles of slurry sealing in Fiscal Year 2010. The first Fiscal Year 2010 resurfacing project is expected to start in April 2010. Once the streets have been completed, staff will manually update the street information needed to allow the Pavement Management System software to calculate the Overall Condition Index (OCI)

based on the individual pavement distresses of streets recently resurfaced. The update will be done on a monthly basis as project updates are received from Field Engineering. The procedure for manually updating of OCI for each street segment will include:

1. Visually inspect the newly resurfaced street.
2. Drive the street and assign it a 'Ride' factor based on smoothness.
3. Assign a distress value.
4. Create a new inspection activity in Pavement Management System for each street segment.
5. Enter the data gathered into the Pavement Management System.
6. Staff using the Pavement Management System will then compute and update the OCI.

The above procedure will be repeated for each of the 8 to 10 segments in each mile of street resurfaced.

For streets that will not be resurfaced as part of the Fiscal Year 2010 projects list, staff plans on using data from the Fiscal Year 2011 Streets Assessment Survey to calculate the OCI. Based on the estimated completion of the Fiscal Year 2010 resurfacing projects and then the Streets Assessment Survey the City is expected to have an updated OCI for all streets at the end of calendar year 2011.

**Recommendation #3:** *Implement a degradation program into the Pavement Management System to update street condition ratings on a periodic basis.*

Street Division worked with the manufacturer of the Pavement Management System (CarteGraph) to upgrade the Pavement Management System. As part of the upgrade, a Degradation Program that includes all major degradation values was incorporated into the Pavement Management System in June of 2009.

**Recommendation #4:** *Formally document written policies and procedures for identification and selection of streets for inclusion into the Resurfacing Program.*

Streets Division is currently working on preparing a formal document that captures the policies and procedures for the identification and selection of streets into citywide street resurfacing contracts. The document is expected to be finalized in March 2010.

## Audit Committee Recommendations (Items 3 and 4)

**Audit Committee Direction #3:** *Incorporate public input within the methodology for evaluating road conditions and that the Pavement Management System be made available to the public within 24 months.*

The Streets Division has been working with Public Works Information Technology staff to develop an interactive map that will be posted on the City's website. The map will display three different colors identifying streets in good, fair, and poor condition and also enable the public to click on any street and obtain the OCI value. In addition, Streets Division will add a field to the interactive map that will enable citizens to enter in requests ranging from fixing a pothole to requesting street resurfacing. These requests will be reviewed and considered during the annual selection process for streets to be serviced. The interactive map is expected to be available by August 2010.

**Audit Committee Direction #4:** *Incorporate Pavement Management System and Overall Condition Index information to develop a deferred maintenance calculation that contains a net liability and suggested annual required contribution payment to pay down deferred maintenance.*

The Streets Division Pavement Management System includes a function that enables the department to calculate the total cost to improve the City's street to an OCI level over a specified number of years. Staff has stated that once the Street Condition Assessment has been completed in Fiscal Year 2011, and all of the OCI values have been updated, they will provide a deferred maintenance calculation that is able to predict the annual required funding to eliminate deferred maintenance. Staff was not specific as to when they will be able to present this information to the City Council. ***The IBA suggests that the Audit Committee may want to discuss further with staff the timing of producing a deferred maintenance calculation for all categories (Streets, Facilities, Storm Drains, and Sidewalks), and the necessary policy discussions that needs to occur with the City Council to facilitate the process.***

## Next Steps

As part of the motion approved by the Audit Committee on November 9, 2009 the Committee members directed that the implementation plan be forwarded to the City Council for approval. ***The IBA recommends that this implementation plan be forwarded to City Council but only after the other two Performance Audit reports are completed. This will enable staff to address other possible recommendations from the City Auditor in a comprehensive package that is forwarded to the City Council.*** The City Auditor expects to complete the two additional reports at the end of this fiscal year. Regardless of when the other two reports are completed, staff has committed to moving

forward with the implementation plan to address the City Auditor's and Audit Committee's recommendations detailed above.

## CONCLUSION

As directed by the Audit Committee at the November 9, 2009 meeting, the IBA has worked with Streets Division Management to develop an implementation plan to address the City Auditor's October 26, 2009 Performance Audit and the direction provided by the Committee members. In this report the IBA has made the following suggestion and recommendation for Audit Committee consideration:

- *The Audit Committee may want to discuss further with staff the timing of producing a deferred maintenance calculation for all categories (Streets, Facilities, Storm Drains, and Sidewalks), and the necessary policy discussions that needs to occur with the City Council to facilitate the process.*
- *The IBA recommends that this implementation plan be forwarded to City Council but only after the other two Performance Audit reports are completed. This will enable staff to address other possible recommendations from the City Auditor in a comprehensive package that is forwarded to the City Council.*

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